

In the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (previously presented) A packet router that supports multi-time scale resource management, comprising:

a management agent (“MA”) that manages a differentiated services policy information database operable to store policies on forwarding packets in the packet router;

a resource server system (“RSS”) that controls forwarding of packets in the packet router based on adaptive selections of policies from the policy information database;

a flow measurement system (“FMS”) that monitors packet flows through the packet router and generates statistic reports which affect the RSS selection of control;

wherein the FMS includes:

a dynamic component for controlling adaptation of the packet router to dynamic service requirements and resource conditions, wherein the dynamic component further comprises;

a monitor resource controller for receiving adaptive selections of policies from the policy information database and for distributing the generated statistics reports; and

a monitor resource abstraction library that functions as a real-time monitor executive and generates the statistics reports; and

a hardware forwarding engine (“HFE”) that receives and forwards packets in response to the RSS controls.

2. (previously presented) The packet router of claim 1 wherein the MA resides in a management plane of a communications network.

3. (original) The packet router of claim 1 wherein the RSS resides in a control plane of a communications network.

4. (original) The packet router of claim 1 wherein the HFE resides in a data plane of a communications network.

5. (original) The packet router of claim 4 wherein the communications network comprises an internet protocol (“IP”) network.

6. (previously presented) The packet router of claim 1 wherein the FMS distributes the statistics reports generated by the FMS.

7. (canceled).

8. (original) The packet router of claim 1 wherein the FMS includes a monitor data collector/data source controller (“MDC”) for receiving data collected at observation points of the HFE.

9. (currently amended) A system for supporting multi-time scale resource management in a packet router, the system comprising:

means for managing a differentiated services policy information database that stores policies on forwarding packets in the packet router;

means for controlling forwarding of packets in the packet router based on adaptive selections of policies from the policy information database;

means for monitoring packet flows through the packet router based on an interpreted service level agreement related to the adaptive selections of policies from the policy information database;

means for generating statistic reports that affect a resource server system selection of control;

wherein the means for generating statistic reports further comprises:

a reports buffer for buffering the generated statistics reports;

a policy information buffer; and
a dynamic component for controlling adaptation of the packet router to dynamic service requirements and resource conditions, wherein the dynamic component further comprises:
a monitor resource controller for receiving adaptive selections of policies from the policy information database and for distributing the generated statistics reports;
a monitor resource abstraction library that functions as a real-time monitor executive and generates the statistics reports; and
a monitor data collector/data source controller for receiving data collected at observation points of the means for receiving and forwarding; and
means for receiving and forwarding packets in response to the resource server system controls.

10. (original) The system of claim 9 wherein the means for managing is a management agent (“MA”).

11. (original) The system of claim 9 wherein the means for controlling forwarding of packets in the packet router is a resource server system (“RSS”).

12. (original) The system of claim 9 wherein the means for receiving and forwarding is a hardware forwarding engine (“HFE”).

13. (original) The system of claim 9 wherein the means for monitoring is a flow measurement system (“FMS”).

14. (original) The system of claim 13 wherein the means for generating statistic reports is a flow measurement system (“FMS”).

15-16. (cancelled).

17. (currently amended) A method of providing multi-time scale resource management in a packet router, the method comprising:

managing a differentiated services policy information database that stores policies on forwarding packets in the packet router;

controlling forwarding of packets in the packet router based on adaptive selections of policies from the policy information database;

monitoring packet flows through the packet router;

generating statistic reports by a monitor resource controller that affect the forwarding of packets in the packet router;

controlling adaptation of the packet router to dynamic service requirements and resource conditions;

receiving adaptive selections of policies from the policy information database and ~~for~~ distributing the generated statistics reports; and

receiving and forwarding packets in response to the control of the forwarding of packets in the packet router.

18. (original) The method of claim 17 wherein the managing is performed by a management agent.

19. (original) The method of claim 17 wherein the controlling forwarding of packets in the packet router is performed by a resource server system.

20. (original) The method of claim 17 wherein the monitoring is performed by a flow measurement system.

21. (original) The method of claim 17 wherein the generating statistic reports is performed by a flow measurement system.

22. (original) The method of claim 17 wherein the receiving and forwarding is performed by a hardware forwarding engine.